

## **Introduction**

The plant *Brassica rapa* (family: Brassicaceae) is an annual flowering plant that completes its lifecycle in approximately one month. During this time, the plant will develop leaves, flower, and set seed. The rapid development of this plant and other plants within the Brassicaceae family may be useful because of its economic importance in supplying food and other consumer products.

Evidence for rapid growth may be seen in a shoot growth response curve. I predict that the growth response curve will be linear, with continuous growth throughout the plant lifecycle.

## **Materials and Methods**

Approximately eight *Brassica rapa* seeds were planted in styrofoam containers filled with soil and one fertilizer pellet. The plants were grown under 24-hours of light, and were continuously watered to avoid water-stress. Five seedlings germinated, and one was removed to reduce competition between plants. Shoot height (mm) was measured bi-weekly using a ruler, and morphological development was recorded at this time as well. Flowers were pollinated using a paintbrush at 16 days after germination. Shoot height and morphological development are presented as an average of the four plant heights and days after planting.

## **Results**

The growth response curve was linear, with shoot height ranging from 5.3 mm at day 2 to 156.3 mm at day 27 (Figure 1). First true leaves appeared approximately on day 9, and the first flowers first appeared on day 14. Each

flower had only 4 petals, 4 stamens, and one pistil. Seed set was first observed on day 21, and plant senescence began approximately on day 26.

## Discussion

The *Brassica rapa* plants exhibited shoot elongation throughout their lifecycle. This may have been a result of...{you fill in the blank here}. These plants may best be adapted for environments... {you fill in the blank here}.

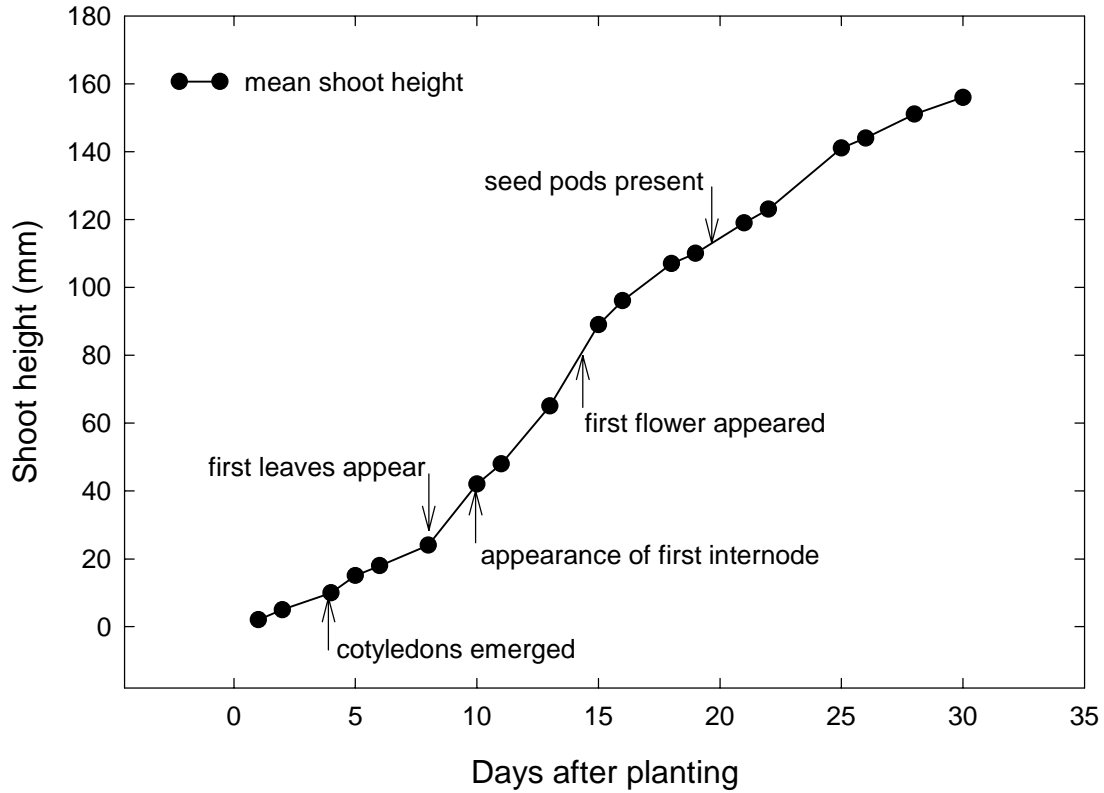


Figure 1. Mean shoot height of *Brassica rapa* plants grown over a one-month period.